

Expert Report and Deposition of Dennis W. Carlton in Re: Johnson Matthey v. General Motors (Antitrust Counterclaim), District Court for the Eastern District of Wisconsin, No. 93 C 0931, January 9, 1996 (Expert Report), February 14, 1996 (Deposition).

Brief of Evidence, Summary of Evidence, and Testimony of Dennis W. Carlton on Behalf of Defendants in Re: Shell (Petroleum Mining) Company Limited and Todd Petroleum Mining Company Limited v. Kapuni Gas Contracts Limited and Natural Gas Corporation of New Zealand Limited, In the High Court of New Zealand, Auckland Registry, Commercial List, CL 5/94, April 2, 1996 (Brief of Evidence), July 18, 1996 (Summary of Evidence), and July 18-19, 1996 (Testimony).

Expert Report, Deposition, and Testimony of Dennis W. Carlton in Re: The Matter of the Arbitration Between Sprint Communications Company L.P. and Network 2000 Communications Corporation, Arbitration Case Number 57 181 0013 94, July 15, 1996 (Expert Report with H. Sider), August 12, 1996 (Deposition), and September 27, 1996 (Testimony).

Testimony and Prepared Statement of Dennis W. Carlton on behalf of Sacramento Municipal Utility District in Re: Pacific Gas & Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company: Before the Federal Energy Regulatory Commission Technical Conference on Market Power & Transmission Pricing, Docket Nos. ER96-1663-000, EC96-19-000, EL96-48-000, September 12, 1996.

Declaration of Dennis W. Carlton in Re: United States of America v. International Business Machines: In the United States District Court for the Southern District of New York, Civil Action No. 72-344 (AGS), November 12, 1996.

Expert Report, Affidavit Rebuttal and Deposition of Dennis W. Carlton in Re: Bell Atlantic Corporation and DSC Communications Corporation v. AT&T Corporation and Lucent Technologies Inc., Civil Action No. 5-96CV45, December 4, 1996 (Expert Report with R.E. Olley and D.S. Sibley), January 10, 1997 (Affidavit Rebuttal with R.E. Olley and D.S. Sibley), and January 21, 1997 (Deposition).

Affidavit of Dennis W. Carlton in Re: Pacific Gas & Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company: United States of America Before the Federal Energy Regulatory Commission, FERC Docket No. ER96-1663-000, January 16, 1997 (with G.E. Bamberger).

Affidavit of Dennis W. Carlton in Re: Advanta Corp., Advanta National Bank U.S.A., and Advanta National Bank v. Visa U.S.A., Inc. and Mastercard International, Inc.: In the United States District Court for the Eastern District of Pennsylvania, Civil Action No. 96-CV-7940, January 21, 1997.

Deposition, Testimony, and Surrebuttal Testimony of Dennis W. Carlton in Re: In the Matter of Toys "R" Us, Inc.: In the United States of America Before the Federal Trade Commission, File No. 9278, March 16, 1997 (Deposition), April 16 and 25, 1997 (Testimony), and June 3, 1997 (Surrebuttal Testimony).

Deposition of Dennis W. Carlton in Re: In the Matter of Theresa Aguilar, et al vs. Atlantic Richfield Corporation et al: In the Superior Court of the State of California In and For the County of San Diego, File No. 700810, September 30, 1997 (Deposition).

Report of Dennis W. Carlton in Re: Few Ready Mix Concrete Co., v. Transit Mix Concrete & Materials Co., et al: In the United States District Court for the Eastern District of Texas Lufkin Division, No. 9:96-CV-86, October 31, 1997 (with W. J. Lynk).

Verified Statement, Depositions, Verified Reply Statement, and Verified Rebuttal Statement of Dennis W. Carlton in Re: CF Industries, Inc. v. Koch Pipeline Company, L.P.: In the United States of America Before the Department of Transportation Surface Transportation Board, No. 41685, November 7, 1997 (Verified Statement), December 19, 1997 (Deposition), January 8, 1998 (Verified Reply Statement), February 3, 1998 (Deposition), and February 20, 1998 (Verified Rebuttal Statement).

Expert Witness Report, Deposition and Affidavits of Dennis W. Carlton in Re: Industrial Silicon Antitrust Litigation: In the United States District Court for the Western District of Pennsylvania, No. 95-2104, January 9, 1998 (Expert Witness Report), February 10-11, 1998 (Deposition), April 8, 1998 (Affidavit), and June 29, 1998 (Affidavit).

Declaration of Dennis W. Carlton in Re: Applications of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.: Before the Federal Communications Commission, CC Docket No. 97-211, January 25, 1998 (with H. Sider)

Expert Report and Deposition of Dennis W. Carlton in Re: Bepco, Inc., et al v. AlliedSignal Inc. and AlliedSignal Truck Brake System Co.: In the United States District Court for the Middle District of North Carolina, Winston-Salem Division, No. 6:96CV00274, February 3, 1998 (Expert Report) and March 3, 1998 (Deposition).

Affidavit of Dennis W. Carlton in Re: Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.: Before the New York State Public Service Commission, No. 97-C-1804, February 16, 1998 (with H. Sider).

Affidavit of Dennis W. Carlton in Re: Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc.: Before the Florida Public Service Commission, No. 971375-TP, February 27, 1998 (with H. Sider).

Second Declaration of Dennis W. Carlton in Re: Applications of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.: Before the Federal Communications Commission, CC Docket No. 97-211, March 19, 1998 (with H. Sider).

Affidavit, Reports, Reply Affidavit, Reply Report, Prepared Statements and Testimony of Dennis W. Carlton in Re: The Merger of SBC Communications Inc. with Ameritech Corporation: Before the Federal Communications Commission, CC Docket No. 98-141, July 20, 1998 (Affidavit and Report), November 12, 1998 (Reply Affidavit and Reply Report), February 5, 1999 (Prepared Statements and Testimony as a Participant in the Round Table on the Economics of Mergers Between Large ILECS), April 13, 1999 (Report to the FCC on Supplemental Analysis of the Katz/Salop Hypothesis).

Report and Supplemental Report of Dennis W. Carlton in Re: Riverside Pipeline Company v. Panhandle Eastern Pipeline Company: In the U.S. District Court for the Western District of Missouri, No. 97-0642-CV-W-4, September 20, 1998 (Report with H. Sider) and January 7, 1999 (Supplemental Report).

Statement of Dennis W. Carlton in Re: Enforcement Policy Regarding Unfair Exclusionary Conduct in the Air Transportation Industry: Before the Department of Transportation, Office of the Secretary, Washington, D.C., Docket No. OST-98-3713, September 24, 1998 (with G. Bamberger).

Report and Deposition of Dennis W. Carlton in Re: The Procter & Gamble Company, et al. vs. Amway Corporation, et al.: In the U.S. District Court for the Southern District of Texas, Houston Division, January 8, 1999 (Report) and February 9, 1999 (Deposition).

Responsive Direct Testimony and Prepared Answering Testimony of Dennis W. Carlton for Intervenor Oklahoma Gas and Electric Company in Re: Joint Application of American Electric Power Company, Inc., Public Service Company of Oklahoma and Central and South West Corporation Regarding Proposed Merger: Before the Corporation Commission of the State of Oklahoma, Cause No. PUD 980000444, March 29, 1999 (Responsive Direct Testimony with G. Bamberger) and April 27, 1999 (Prepared Answering Testimony with G. Bamberger).

Report and Declaration of Dennis W. Carlton in Re: Telnet Communications, Inc., et al. v. WorldCom, Inc., et al.: In the United States District Court for the Southern District of Texas, Houston Division, No. H-98-2020, March 30, 1999 (Report) and April 28, 1999 (Declaration).

Expert Report and Deposition of Dennis W. Carlton in Re: United States of America vs. American Society of Composers, Authors and Publishers in the Matter of the Application of Turner Broadcasting Systems Inc. for the Determination of Reasonable License Fees: Before the United States District Court, Southern District of New York, Civ. 13-95 (WCC) (Referred to Magistrate Judge Dolinger), April 15, 1999 (Expert Report), and July 28-29 and August 5, 1999 (Deposition).

Declaration, Deposition and Reply Declaration of Dennis W. Carlton in Re: Visa Check/MasterMoney Antitrust Litigation: Before the United States District Court, Eastern District of New York, No. CV 96-5238 (JB) RLM), April 15, 1999 (Declaration), May 25, 1999 and June 1, 1999 (Deposition), and August 1, 1999 (Reply Declaration).

Report and Deposition of Dennis W. Carlton in Re: Zeneca Limited, Zeneca Holdings Inc., and Zeneca Inc. v. Rhone-Poulenc Inc. and Rhone-Poulenc AG Company: In the United States District Court for the District of Delaware, No. 97-652-GMS, May 17, 1999 (Report) and June 16, 1999 (Deposition).

Affidavit and Reply Affidavit of Dennis W. Carlton in Re: Andersen Consulting Business Unit Member Firms v. Arthur Andersen Business Unit Member Firms and Andersen Worldwide Societe Cooperative: Before the International Court of Arbitration of the International Chamber of Commerce, No. 9797/CK, June 2, 1999 (Affidavit) and September 13, 1999 (Reply Affidavit).

Report, Rebuttal Report, Reply Report, and Rebuttal Report of Dennis W. Carlton in Re: The Commissioner of Competition and Superior Propane Inc. and ICG Propane Inc.: Before The Competition Tribunal, No. CT-98/2, August 17, 1999 (Report), September 14, 1999 (Rebuttal Report with G. Bamberger), September 19, 1999 (Reply Report with G. Bamberger), and September 27, 1999 (Rebuttal Report to Professor Michael Ward with G. Bamberger).

HAL SIDER
Economist

Exhibit 2 to Attachment A
July 1999

Business Address: Lexecon Inc.
332 S. Michigan Ave.
Suite 1300
Chicago, IL 60604 (312) 322-0229

Home Address: 385 Ramsay Road
Deerfield, IL 60062 (847) 405-0153

EDUCATION

Ph.D., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1980.

M.A., UNIVERSITY OF WISCONSIN, Madison, Wisconsin: Economics, 1978.

B.A., UNIVERSITY OF ILLINOIS, Urbana, Illinois: Economics, 1976.

EMPLOYMENT

LEXECON INC., Chicago, Illinois (October 1985 - present): Principal and Vice President.

U.S. COMMISSION ON CIVIL RIGHTS, Washington, D.C., (August 1984 - October 1985): Co-Director: Project on Minority Income Trends.

OFFICE OF POLICY: U.S. DEPARTMENT OF LABOR, Washington, D.C., (May 1982 - August 1984): Economist.

PRESIDENT'S TASK FORCE ON FOOD ASSISTANCE (on leave from U.S. Department of Labor), Washington, D.C., (September 1983 - February 1984): Research Associate.

OFFICE OF RESEARCH AND EVALUATION; BUREAU OF LABOR STATISTICS, Washington, D.C., (September 1980 - May 1982): Economist.

UNIVERSITY OF WISCONSIN, Madison, Wisconsin (1978 - 79): Teaching Assistant.

UNIVERSITY OF WISCONSIN, Madison, Wisconsin (1976 - 78): Science Writer.

FIELDS OF SPECIALIZATION

Applied Microeconomics
Econometrics
Industrial Organization
Labor Economics

ARTICLES

- "Market Power and Vertical Restraints in Retailing: An Analysis of FTC v. Toys 'R' Us," (with Dennis Carlton), in The Role of the Academic Economist in Litigation Support, edited by Daniel Slottje (1999).
- "The Competitive Effects of Line-of-Business Restrictions in Telecommunications," Managerial and Decision Economics (1995), with Kenneth Arrow and Dennis Carlton. (Reprinted in R. Higgins and P. Rubin, eds., Deregulating Telecommunications: The Baby Bells' Case for Deregulation, Wiley Series in Managerial Economics, 1995.)
- "Applications of Economic Theory and Econometric Methods to Merger Review in the United States," (paper presented to European Commission Merger Task Force, 1992), with A. Rosenfield and W. Bishop.
- "Unemployment Incidence and Duration: 1968-1982," American Economic Review (June 1985).
- "The Pay Gap and Occupational Segregation: Implications for Comparable Worth," Proceedings of the Industrial Relations Research Association (1985), with June O'Neill.
- "Work-Related Accidents and the Production Process," Journal of Human Resources (Winter 1985).
- "Labor Force Participation and the Relative Earnings of Black and White Males: 1940-80," with Andy Sparks, (paper presented at the World Congress of the Econometric Society, 1985).
- "Comment on McIntyre: Estimating Long-Term Labor Market Flows from CPS Data," Proceedings: Conference on Applications of Gross Flow Data, U.S. Bureau of the Census (1985).
- "The Changing Makeup of the Military and the Effect on Labor Force Data," Monthly Labor Review (July 1984), with Cheryl Cole.
- "Accuracy of Response in Labor Market Surveys: Evidence and Implications," Journal of Labor Economics (October 1983), with Wesley Mellow.
- "Safety and Productivity in Underground Coal Mining," Review of Economics and Statistics (May 1983).
- "Economic Incentives and Safety Regulation," American Economist (Summer 1983).
- "Consumers and Product Safety: Market Processes and Imperfections," Policy Studies Journal (February 1983), with Eugene Smolensky.

REPORTS

The Economic Progress of Black Men in America, U.S. Commission on Civil Rights (1986).

Economic Status of Americans of Eastern and Southern European Ancestry, U.S. Commission on Civil Rights (1986).

Report of the President's Task Force on Food Assistance, Curran Press, Alexandria, Virginia (1984).

MISCELLANEOUS

University-Industry Dissertation Fellowship, University of Wisconsin, 1979-80.

Referee for: Review of Economics and Statistics; Journal of Labor Economics; Journal of Human Resources; Policy Studies Journal; National Science Foundation; Journal of Law and Economics; U.S. Department of Health and Human Services; Social Science Research Council; National Commission on Employment Policy; Journal of Legal Studies.

TESTIMONIAL EXPERIENCE

Application of Illini Carrier L.P. before Illinois Commerce Commission. Testimony in April 1988 regarding application to provide natural gas transportation services; on behalf of Illini Carrier.

McLendon et al. v. Continental Group et. al, U.S. District Court for the District of New Jersey, Civil Action No. 83-1340 (SA). Trial testimony in February 1989, testimony before Special Master in February 1990; testimony before Special Master (with Sherwin Rosen) in August 1990; on behalf of Continental Group.

Turner v. IDS Financial Services, Inc., U.S. District Court for the District of Minnesota, File No. 88-521. Report in November 1989; on behalf of IDS.

Times Herald Printing Company v. A.H. Belo Corp. and Dallas Morning News Company, District Court of Harris County Texas, 280th Judicial District. Deposition testimony in April 1990; on behalf of Dallas Morning News.

N. Savakis v. Beatrice Company, U.S. District Court for the N.E. District of Illinois Eastern Division, No. 89 C5790. Deposition testimony in June 1990; on behalf of Beatrice.

Sepich v. Mueller, U.S. District Court for the Central District of Illinois, U.S. District Court, Case No. 88-2353. Report in March 1991 (with Sherwin Rosen); on behalf of Mueller.

Morgan v. ServiceMaster, U.S. District Court for the Northern District of Illinois, Case No. 89-C-0581. Report in August 1991 (with Sherwin Rosen); on behalf of ServiceMaster.

Castaneda v. Baron Wire and Steel Inc., Circuit Court of Cook County, Illinois, Municipal Department, Second District. Deposition testimony in February 1992; on behalf of Castaneda.

Wisconsin Central Transportation Corporation -- Continuance in Control -- Fox Valley and Western Ltd., Finance Docket 32036. Verified Statement to the Interstate Commerce Commission in September 1992 (with Andrew M. Rosenfield); on behalf of the Wisconsin Central.

G. Bowan v. The Sales Force Companies, U.S. District Court for The Western District of Missouri, Case No. 92-0496-CV-W-2. Affidavit in February 1993; on behalf of Sales Force.

NAACP et. al. v. American Family Mutual Insurance Co., U.S. District Court, Eastern District of Wisconsin, Civil Action No. 90-C-0759. Deposition testimony in July 1994 and November 1994; on behalf of American Family.

W. Borysiewicz v. M. Gilblair, Circuit Court of Cook County, Illinois. Deposition testimony in August 1994; trial testimony in September 1994; on behalf of Borysiewicz.

AVR, Inc. v. Cemstone Products Corp., U.S. District Court, District of Minnesota, Third Division, File CIV 3-92-551. Expert report in October 1994; supplemental affidavits in December 1994, January 1995; on behalf of Cemstone.

Carbon Dioxide Industry Litigation, U.S. District Court for Central District of Florida MDL940. Expert report in October 1994 (with William M. Landes); supplemental report (with William M. Landes and Richard Leftwich) in May 1995; deposition testimony in July 1995; on behalf of opt-out plaintiffs.

Report submitted in May 1996 on behalf of National Association of Independent Insurers to the National Association of Insurance Commissions.

Beazer East v. CSX Transportation, Inc., U.S. District Court for the Western District of Pennsylvania Case No. 93 0861, Expert report in April 1996; deposition testimony in June 1996; on behalf of CSX.

Sprint Communications Company L.P. v. Network 2000 Communications Corporation, Expert report on July 15, 1996, deposition testimony in July, August 1996; affidavit on November 9, 1996; on behalf of Sprint.

Galvan v. U.S. Industries, Expert Report on December 27, 1997, deposition testimony in January 1997; on behalf of U.S. Industries.

Gelumbauskas v. Precision Gear, U.S. District Court, Northern District of Illinois Eastern Division, Case No. 96 C 0862. Expert report in April 1997; on behalf of Gelumbauskas.

Johnson and Lehl v. City Colleges of Chicago, U.S. District Court for the Northern District of Illinois Eastern Division Case No. 96 C 0862. Expert report in July 1997, deposition testimony in November 1997; on behalf of City Colleges of Chicago.

Smith v. Amtrak, Circuit Court of Cook County, IL, Case 92 L 10525. Deposition in November 1997, trial testimony in January 1998; on behalf of Smith.

Declaration before the Federal Communication Commission, CC Docket No. 97-211, in the Matter of Applications of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications to WorldCom, Inc., January 25, 1998 (with Dennis Carlton); on behalf of WorldCom and MCI.

Shuller v. United States, U.S. District Court for the Eastern District of Pennsylvania, Civil Action No. 97-3820, Expert report in February, 1998; on behalf of U.S. Department of Justice.

Affidavit before the New York State Public Service Commission, Case 97-C-1804, Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc., February 16, 1997 (with Dennis Carlton); on behalf of WorldCom.

Affidavit before the Florida Public Service Commission, Docket No. 971375-TP, Petition of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc., February 27, 1997 (with Dennis Carlton); on behalf of WorldCom.

Second Declaration before the Federal Communication Commission, CC Docket No. 97-211, in the Matter of Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc., March 19, 1998 (with Dennis Carlton); on behalf of WorldCom and MCI.

Testimony before the Public Utilities Commission of the State of Colorado, Docket No. 97A-494T, In re Application of WorldCom, Inc. for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc., pre-filed direct testimony (March 25, 1998), cross-examination (April 2, 1998); on behalf of WorldCom.

Gas City Limited v. Indiana Department of Transportation, Circuit Court of St. Joseph County, Cause No. 71D06-9803-CP00393, April 23, 1998; on behalf of Gas City.

Testimony before the Department of Public Service Regulation, Public Service Commission of the State of Montana, Docket No. D97.10.191, In the Matter of the Application of WorldCom, Inc. and MCI Communications Corporation for Approval to Transfer Control of MCI Communications Corporation to WorldCom, Inc., May 12, 1998, on behalf of WorldCom.

Testimony before the Department of Public Service of the State of West Virginia in the Matter of Application of WorldCom, Inc., Corp., for Approval to Transfer Control of MCI Communication to WorldCom, Inc. (June 17, 1998); oral testimony (July 2, 1998), on behalf of WorldCom.

Lemon, Myer, Duncan et. al. V. International Union of Operating Engineers, et. al., United States District Court for the Eastern District of Wisconsin, Case No. 97-C-0857; Affidavit in September 1998, on behalf of International Union of Operating Engineers.

Riverside Pipeline Co., v. Panhandle Eastern Pipeline Co., United States District Court for the Western District of Missouri, Case No. 97-0642-CV-W-4, Expert Report in September 1998, on behalf of Panhandle Eastern Pipeline Co.

Report to the Federal Communications Commission, CC Docket No. 98-141 regarding the merger of SBC Communications Inc. with Ameritech Corporation (April 1999).

B

ATTACHMENT B

DECLARATION OF BRUCE M. OWEN

Economic Consequences of the Hole in the Doughnut

Declaration of Bruce M. Owen

Summary

Qwest Communications International, Inc. (Qwest) and U S WEST, Inc. (U S WEST) have applied for authority to merge. I have been asked to consider the effect of such a merger on the economic incentive of the combined company to satisfy the conditions set out in Section 271 of the 1996 Telecommunications Act. Once an RBOC such as U S WEST has satisfied Section 271, it is permitted to enter the long distance business within its region. Qwest contends that the merged company will have stronger incentives to satisfy Section 271 quickly, stronger incentives than U S WEST alone would have. I agree with this assessment.

What is needed in order to analyze the effect of the merger on incentives is a comparison of the profit opportunities facing the combined company after the merger with the profit opportunities that would have faced U S WEST alone, absent the merger. Issues related to current or potential competition between Qwest and U S WEST and the business rationale for the deal are addressed by others.

Of course, U S WEST is required by law to satisfy many of the Section 271 conditions, and would have some economic incentives to obtain Section 271 authority in any case. For purposes of my analysis, I assume that U S WEST has, within the law, discretion as to the pace at which it seeks approval to provide in-region interLATA service. After all, the Commission and the courts have not yet, or at best only recently, defined the conditions fully and no RBOC has yet obtained such authority. Once the conditions are clearly defined, moreover, satis-

faction of them requires the expenditure of hundreds of millions of dollars on systems and equipment, along with negotiations with carriers and regulators, testing, audits, and so on. This process doubtless could be accelerated by spending more money, or at a faster rate, than whatever is reasonably required merely to comply with Section 251. For example, Bell Atlantic, which claims to have satisfied the Section 271 conditions in New York, reports having spent \$1 billion on its effort. If Bell Atlantic had spent somewhat less, or at a slower rate, presumably it would not be in a position to claim satisfaction of the requirements until some number of months later than it has.

Pre-merger incentive structure

I assume that the costs and benefits of satisfying Section 271 requirements will affect the timing of an RBOC's satisfaction of Section 271. The primary benefit is the anticipated profit from entering into the provision of interLATA long distance service to in-region customers. In order to compete effectively against inter-exchange carriers with nationwide service areas, an RBOC also will have an incentive to provide out-of-region interLATA service for its in-region customers with multi-region locations. This out-of-region business would be incremental to the RBOC's in-region business. Furthermore, an RBOC with such a national presence is likely to find it profitable to begin offering interLATA service to customers located primarily out-of-region.

There are two categories of cost. First, there is the cost associated with direct investment in equipment, systems and personnel necessary to satisfy Section 271. Second, an RBOC will also factor in the cost, measured in lost profits, from any reduction in its local exchange market share due to increased CLEC entry that is directly attributable to satisfaction of Section 271. If the costs, including the opportunity costs, of being barred from in-region interLATA markets in-

crease, on account of the merger, then the incentives to satisfy Section 271 will become more powerful.

Post merger incentive structure

There are several reasons why the combined company can expect to earn *greater* net profits from entering the long distance business than U S WEST alone could expect. First, unlike many RBOCs, U S WEST currently owns virtually none of its interLATA "official services" network and it owns no interLATA switches. For this reason, U S WEST entering on its own would have to construct or lease nationwide interexchange network capacity at prevailing market prices, whereas the combined company would already own capacity on its interLATA network whose cost is sunk.

Second, unlike U S WEST alone, the combined company will already have an established national marketing identity, customer base and specialized products out-of-region. However, the combined company will have a fourteen-state hole in its footprint. Demand from present and potential out-of-region long distance customers will be enhanced by the combined firm's ability once again to offer nationwide service. Further, the incremental revenues and profits available to the combined company after 271 approval, building on Qwest's established brand identity, customer base and existing interconnection arrangements, would exceed the initial revenues and profits available to U S WEST as a new entrant into out-of-region long distance markets. Thus, the present value of long distance revenues and profits arising out-of-region would be greater for the combined company than for U S WEST alone.

Third, many potential in-region long distance customers of U S WEST will prefer to be served by a national facilities-based carrier. As a result, the combined company will have an initial advantage in selling to such customers compared to

U S WEST alone, which would be unable immediately to offer an established nationwide facilities-based service. Thus, the present value of long distance revenues and profits arising in-region would be greater for the combined company than for U S WEST alone.

The *direction* of the net effects of the incentives described above on the combined company is indisputable—it is to make in-region entry, and thus satisfaction of Section 271, more profitable than before the merger. The merger causes no incentives working in the other direction. As Dennis Carlton and Hal Sider point out in their paper, the merger also creates no new incentives to restrict competition. The merger's only effect relevant to economic policy is its clear tendency to accelerate satisfaction of Section 271 in the fourteen-state U S WEST region.

The Comments

Commenting parties do not dispute the points made in the merger application about the combined company's incentives to obtain Section 271 authority. Several of the commenters nevertheless attempt to show that incentives to discriminate post-merger will actually increase. However, the commenting parties fail to articulate a sound economic basis for their positions on Qwest's post-merger incentives.

First, some commenters state that U S WEST has the incentive to discriminate against its local exchange competitors and claim that U S WEST has, in fact discriminated in the past. Whether true or not, this argument is not relevant to the issue of whether the merger is in the public interest. It does not address the combined firm's incentives to satisfy Section 271 or any other effect of the merger itself. The issue is whether a post-merger Qwest has a greater incentive to satisfy Section 271 than U S WEST would have as a separate entity. It is the *change* in this

incentive due to merger that is the key point—and a point that commenters fail to acknowledge.

Second, some commenters claim that the merger will increase the incentive of the merged entity to discriminate against local exchange competitors, based on Qwest's current CLEC activities in the U S WEST region. However, these activities are trivial and will have no meaningful impact on Qwest's post-merger incentives to satisfy Section 271 conditions.

Third, two commenters speculate that a post-merger Qwest will divert dividends from shareholders to out-of-region investment opportunities and will generally direct investment funds out-of-region to the detriment of in-region service. So far as dividends are concerned, this is a non-sequitur. If dividends are reduced on account of the merger, more rather than less funds will be available for investment both in-region and out-of-region. More generally, out-of-region investment is no less likely to be procompetitive than in-region investment. Finally, the commenters ignore the combined firm's increased incentive to satisfy Section 271, and thereby to increase its focus on in-region investment.

I. Qualifications

I am an economist, president of Economists Incorporated, and visiting professor of economics at Stanford University's Stanford-in-Washington internship program. Previously, I served as chief economist of the Antitrust Division of the U. S. Department of Justice, and the White House Office of Telecommunications Policy. I testified on behalf of the United States in the case that led to the dissolution of AT&T. I have consulted for and filed testimony on behalf of various telecommunications firms, including AT&T, MCI and Sprint. I have written a number of articles and books on topics related to antitrust and to telecommunications policy. In particular, I co-authored with Roger Noll two articles¹ explaining the economic theory of the lawsuit that led to the breakup of AT&T and the basis for the prophylactic restrictions placed on the RBOCs by the Modification of Final Judgment. A copy of my curriculum vitae is attached to this paper.

II. Premerger incentives

The basic incentive structure facing an RBOC with respect to Section 271 is not complicated. There are costs and benefits, and each will differ, depending on the timing of authorization and other factors. The benefits are the potential profits to be earned from entering the long distance business. As discussed above, an RBOC will have the incentive to provide not only in-region interLATA services

¹ R. G. Noll and B. M. Owen, "United States v. AT&T: An Interim Assessment," in Hausman and Bradley, eds., *Future Competition in Telecommunications*, Harvard Business School Press, 1988; R. G. Noll and B. M. Owen, *United States v. AT&T: The Economic Issues*, in Kwoka and White, eds., *The Antitrust Revolution*, Scott Foresman, 1988; 2nd ed. 1994.

to local customers but also out-of-region services. The cost of satisfying Section 271 has two parts. The first is the direct investment in systems and facilities required by the Section 271 conditions. The second is the loss of profits associated with a lower market share of and competitive entry into the local exchange business.

Each of these costs and benefits is a flow which can be expected to change over time as market shares, costs and prices respond to changing market conditions. In other words, an RBOC's market shares in long distance and in local exchange markets are not likely to be the same immediately after Section 271 authority is obtained as they will be two or three years later. In addition, there are market risks that affect the rates at which future costs and revenues must be discounted to present value. If we regard the amount and timing of expenditure on obtaining Section 271 authority as the policy variables, an RBOC will rationally – within relevant legal constraints – try to schedule that expenditure so as to maximize the discounted expected value of net profits resulting from these streams of costs and benefits.²

² A quantitative analysis of the costs and benefits of seeking Section 271 authorization would attempt to estimate such factors as incremental lost local service revenues net of payments for UNEs, and gained net profits from long distance service. I have no basis for making such a quantitative analysis for U S WEST. However, the proposed merger with Qwest would change nothing in such an analysis except to increase the potential profits from long distance service, which would tend to increase the profit-maximizing rate of expenditure on compliance. In particular, I am aware of nothing about the U S WEST/Qwest merger, relative to the situation with U S WEST alone, that will increase the cost of satisfying Section 271, aside from the acceleration of efforts to gain long distance authority predicted by my qualitative analysis.

III. Postmerger incentives

The Qwest/US WEST combined company will of course inherit US WEST's current incentive structure. I assume that the management of the combined company will be at least as efficient as that of US WEST at present. But ILEC business opportunities will no longer be the only factor influencing the combined company's incentives. I understand that currently US WEST leases in excess of 98 percent of its interLATA "official services" network from other carriers and that US WEST owns no interLATA switches. By contrast, the combined company will own a nationwide long distance business and a national fiber optic network with substantial excess capacity. However, unlike other national long distance competitors, such as AT&T, MCI, and Sprint, the combined company will be handicapped by a service area that is "doughnut-shaped." That is, so long as its ILEC business fails to satisfy Section 271, the combined company will be unable to provide long distance service originating in a fourteen-state region of the country.

If the combined company could serve the "hole" in the doughnut it would have greater revenues and lower costs. Its revenues would be greater because of direct sales opportunities in the fourteen-state region and because it could offer a more attractive nationwide service to customers in all parts of the country. In particular, it would be better able to compete for the business of customers that require service at both in-region and out-of-region locations and the business of wholesale customers seeking regional or nationwide network capacity. Its unit costs would be lower because of higher utilization of its newly-constructed network, the cost of which is sunk.

The combined company's potential profit from entering the long distance business in the fourteen-state US WEST region therefore will be greater than US WEST's current potential profit from satisfying Section 271. It is this *difference*

in the potential profitability of supplying long distance service that bears on the combined company's incentive to achieve Section 271 authority more rapidly.

The combined company can expect *greater* net profits from satisfying Section 271 than U S WEST alone could expect for three reasons:

First, and probably most important, the combined company will already have a nationwide network with substantial capacity, while U S WEST entering on its own would have to obtain national network capacity at prevailing market prices or through new construction. The combined company will own Qwest's new Macro Capacitysm Fiber Network. This network connects approximately 150 metropolitan areas, areas that originate over 95% of all telephone calls made in the United States.³ The network has a speed of up to 10 gigabits per second; can carry voice, video, and data; and can support any Internet-enabled services, including Internet protocol voice transmissions. U S WEST, on the other hand, as noted above, does not own a national network or even an in-region official services network that might be adaptable to provide interLATA services.

The combined company's inheritance of a nationwide network significantly increases its incentives to compete for long distance traffic, relative to those of U S WEST. The combined company will want to attract long distance traffic to fill its network capacity and ensure that it can profit on its investment in a nationwide network. In considering the profitability of attracting long distance traffic, the combined company would not take into account the cost of the capacity, because that cost is already sunk. Further, the combined company will not

³ Qwest completed 18,500 route miles of this network last month and plans to complete a final 300 mile route later this year, to bring the network's final length to 18,800 route miles.

take into account operating costs that might vary with network capacity or route distance, but which do not vary with capacity utilization rates, because these also are costs that will be incurred regardless of whether the combined company has in-region traffic.

Even apart from the loss of revenue that will result from the applicable interLATA restrictions after the merger, the Qwest network will have substantial excess capacity, including the enormous capacity associated with dark fiber. The current capacity of Qwest's network exceeds the combined capacities of AT&T, MCI WorldCom, and Sprint.⁴ The new company will have a strong incentive to satisfy Section 271 as quickly as possible to begin utilizing the capacity already available on the Qwest network. Put differently, as long as the combined company fails to satisfy Section 271, it will incur an opportunity cost for the portion of the network that Section 271 compliance would permit it to fill, because the stream of services that could be supported by the idle capacity is perfectly perishable – it cannot be stored for later use.

In contrast, U S WEST on its own would have to obtain capacity to carry long distance traffic either by building or leasing facilities or acting as a reseller on others' networks. As a result, U S WEST would have to take into account the cost of new capacity it would have to obtain in evaluating the profitability of entering into the long distance business.

⁴ "The combined company will take the nation's fastest, most reliable advanced fiber-optic network – with more bandwidth than the networks of AT&T, Sprint, and MCI Worldcom combined – and link it directly to 29 million customers." Backgrounder Fact Sheet – Next Generation Network <www.qwest.com/press/qwest_uswest.html>.

Second, the combined company would earn greater profits from long distance service outside the U S WEST region if it were able to offer interLATA service within the U S WEST region. After Section 271 authority is obtained, demand from present and potential out-of-region long distance customers will be enhanced by the combined firm's ability once again to offer service on a national network. In the meantime, until Section 271 is satisfied, Qwest's out-of-region business will suffer because of Qwest's inability to offer national service.

Many customers, including multi-location businesses and long distance wholesale customers, insist on dealing with a long distance provider that can offer ubiquitous service. Other customers may want to reduce their transactions costs by purchasing long distance service from a single long distance carrier even though the carrier may lease some of its network from other carriers.

There are various reasons why many customers, including multi-location businesses, prefer to deal with a single long distance provider that can offer national service on an integrated basis.⁵ According to AT&T President John Zeglis, "Customers are looking for one source to provide seamless voice and data service."⁶ Single source procurement of telecommunications services offers a number

⁵ The Commission itself has recognized the advantages a multi-location customer may realize from having a single long-distance carrier. In its decision on the MCI—Worldcom merger, the Commission wrote, "We also find persuasive Applicant's assertions that the merger will allow them to service multi-location customers over their own networks, and that this will enable such customers to receive higher quality and more reliable services than each company is currently able to offer separately." In the Matter of Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc., adopted September 14, 1999, ¶ 199.

⁶ AT&T Annual Report, 1998, page 22.

of advantages for large companies and other entities. For example, high volume business customers often prefer single contracts with one telecommunications supplier because all of their traffic volume can be combined to achieve better volume discounts.⁷ When AT&T acquired Teleport Communications Group in 1998, AT&T reported that it would "...[O]ffer single points of contact for local and long-distance services and customer care, enterprise solutions for businesses with multiple locations, volume discounts across services and an integrated bill for customers who want it."⁸

Third, Section 271 satisfaction should be more attractive to the combined company than it would be to U S WEST alone because the combined company, with its existing national network and customer base, would have both a demand-side and a supply-side head start and thus be able to develop the business much *faster* than U S WEST alone. The incremental revenues and profits available to the combined company after satisfying Section 271, building on Qwest's national network, established brand identity, specialized products, customer base and existing interconnection arrangements, would exceed the initial revenues and profits available to U S WEST as a new entrant to long distance service. Thus, the present value of long distance revenues and profits arising out-of-region would be greater for the combined company than for U S WEST alone, both for the reason just discussed and because Section 271 authority will be obtained sooner with the merger than without.

⁷ MCI WorldCom advertising supplement to the Wall Street Journal, Oct 1, 1998, p. R3.

⁸ AT&T press release announcing completion of merger with TCG, July 23, 1998.

IV. The Comments

The commenting parties do not dispute the points made in the merger application about the combined company's incentives to satisfy Section 271. Several of the commenters nevertheless attempt to show that incentives to discriminate post-merger will actually increase. However, the commenting parties fail to articulate a sound economic basis for their position on Qwest's post-merger Section 271 incentives.

These commenters make three basic points. First, they contend that U S WEST, as an incumbent local exchange carrier, has the ability and incentive to discriminate against CLEC competitors who require access to U S WEST's local exchange facilities.⁹ Second, they claim that Qwest now offers CLEC services in U S WEST territory, directly or through affiliates, and that this fact increases the incentive and ability of the combined firm to discriminate against other CLECs and in favor of affiliated CLECs.¹⁰ Third, they claim that the merged entity will direct U S WEST profits away from shareholder dividends and in-region service improvements toward out-of-region projects.¹¹

None of these arguments refutes the point that the combined firm will have a greater incentive to satisfy Section 271 requirements than does U S WEST alone, and that this is procompetitive. For example, it is not U S WEST's former incentive or ability to discriminate against local exchange competitors that matters, but the *change* in that incentive arising from the merger. As long as the com-

⁹ See, e.g., McLeod at 11-15; Nextlink, et al., at 5-14.

¹⁰ See McLeod at 15-21; Nextlink, et al., at 4-5, 14-15.

¹¹ See McLeodUSA at 21-28, Nextlink et al., at 14.

bined company's incentive to facilitate competition is enhanced because its desire to achieve Section 271 authority is greater than U S WEST's alone, consumers will benefit. The greater the increase in this incentive, the greater the benefit to consumers, but even a small increase will benefit consumers.

Similarly, even assuming for the sake of argument that RBOCs who also operate in-region CLECs may have some special discrimination or evasion of regulation opportunities, there is nothing about the Qwest/U S WEST transaction to exacerbate this situation. Qwest simply does not have significant in-region CLEC facilities today.¹² More important, Qwest brings nothing to U S WEST in this regard that U S WEST could not readily, and much more easily than through this transaction, arrange for itself. U S WEST does not need to merge with Qwest in order to create in-region CLEC businesses on the trivial scale of Qwest's current interests.

Finally, commenters' arguments about diversion of funds, including shareholder dividends, away from in-region investments such as improvements in service quality to out-of-region investment projects are entirely speculative. With regard to the argument about stockholder dividends, if stockholder dividends are instead reinvested in the business, those additional funds would become available for all investment purposes; it makes little sense to argue that an increase in internally generated investment funds would reduce investment.

¹² As noted in the text of the reply comments, Qwest holds very small ownership shares (less than 3%) in two DSL providers, Covad and Rhythms Net. In addition, Qwest has just begun to resell DSL services of those companies in the U S WEST region. Qwest has agreed to purchase conduit in a fiber ring facility in Seattle that traverses both U S WEST and GTE local service territories. Qwest has substantially completed its phase-out of local resale activity in the U S WEST region.